

## OIB - P-3 Orion 04/22/17 Science Report

**Aircraft:**

[P-3 Orion](#) ([See full schedule](#))

**Date:**

Saturday, April 22, 2017

**Mission:**

OIB

**Mission Location:**

Kangerlussuaq, Greenland

**Mission Summary:**

Mission: Helheim-Kangerdlugssuaq (priority: baseline)

This is a repeat mission, and is very similar to missions flown in almost all prior OIB Greenland campaigns. It captures centerline surveys of the two main branches of Helheim, of Kangerdlugssuaq, Fenris and of several branches of Midgard glaciers. We also re-fly the centerline of the Hutchinson Glacier, and establish a new centerline of a glacier which empties into the fjord of Kangerdlugssuaq Glacier just beyond its terminus.

Weather around southwest and west-central Greenland has been unpredictable of late, and tending toward being more cloudy than models have predicted. This was the case again this morning. Meanwhile the southeast coast was almost perfectly clear and experiencing light winds, making it an ideal place for us to fly a baseline-priority mission today, and a scenically spectacular one at that. We were completely successful in flying all east coast lines, and we only periodically lost optical data on the transit lines west of the ice divide. Overall we estimate successful data collection for 95% of the flight.

All instruments performed well, with the slight exception of some minor instability of the ATM T6 (wide-scanner) data system. This caused very brief (<1 minute) outages on three separate occasions today.

Journalist Avi Steinberg, writing for The Guardian, flew with us for the first time today. Avi will be embedded with us for a week.

**Data volumes:**

Accumulation Radar: 1.4 Gb

ATM: 140 Gb

CAMBOT: 46 Gb

DMS: 119 Gb

FLIR: 16 Gb

KT19: 11 Mb

MCoRDS: 1.8 Tb

Narrow Swath ATM: 30 Gb

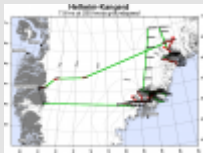
Snow Radar: 1.4 Tb

total data collection time: 7.6 hrs

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**Images:**

### Map of Helheim-Kangerdlugssuaq



Map of today's flight.

[Read more](#)

### Steep mountain glacier



A small mountain glacier plunging into the fjord of Midgard Glacier.

[Read more](#)

## Steenstrup Glacier



The northern calving front of Steenstrup Glacier, which empties into the Denmark Strait.

[Read more](#)

## Cirque



A cirque near Midgard Glacier.

[Read more](#)

## Fenris Glacier



he terminus of Fenris Glacier, with Sermilik Fjord in the foreground.

[Read more](#)

### Submitted by:

John Sonntag on 04/22/17

### Related Flight Report:

## P-3 Orion 04/22/17

### Flight Number:

Science Flight #27-Helheim-Kangerd

### Payload Configuration:

OIB Arctic

### Nav Data Collected:

No

### Total Flight Time:

7.8 hours

### Submitted by:

Cate Easmunt on 04/22/17

**Flight Segments:**

<b>From:</b>	BGSF	<b>To:</b>	BGSF
<b>Start:</b>	04/22/17 12:04 Z	<b>Finish:</b>	04/22/17 19:50 Z
<b>Flight Time:</b>	7.8 hours		
<b>Log Number:</b>	<a href="#">17P006</a>	<b>PI:</b>	Nathan Kurtz
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		

**Flight Hour Summary:**

	<b>17P006</b>
<b>Flight Hours Approved in SOFRS</b>	333.6
<b>Total Used</b>	307.1
<b>Total Remaining</b>	26.5

**17P006 Flight Reports**

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">02/24/17</a>	Airworthiness Test Flight	Check	1	1	332.6
<a href="#">02/26/17</a>	Project Test Flight #1	Check	4.9	5.9	327.7
<a href="#">02/27/17</a>	Project Test Flight #2	Check	3	8.9	324.7
<a href="#">03/07/17</a>	Transit Flight	Transit	8.2	17.1	316.5
<a href="#">03/09/17</a>	Science Flight #1 - North Pole Transect	Science	8	25.1	308.5
<a href="#">03/10/17</a>	Science Flight #2 - Laxon Line	Science	8.5	33.6	300
<a href="#">03/11/17 - 03/12/17</a>	Science Flight #3 - Chukchi West Line	Science	8	41.6	292
<a href="#">03/12/17 - 03/13/17</a>	Science Flight #4 - North Beaufort Loop Line	Science	8.1	49.7	283.9
<a href="#">03/14/17 - 03/15/17</a>	Science Flight #5 - East Beaufort Loop Line	Science	8	57.7	275.9
<a href="#">03/20/17</a>	Science Flight #6 - Sea Ice South Basin Transect (to Thule)	Science	8.1	65.8	267.8
<a href="#">03/22/17</a>	Science Flight #7 - North Flux 02	Science	7.9	73.7	259.9
<a href="#">03/23/17</a>	Science Flight #8 - Zig Zag West Line	Science	7.9	81.6	252
<a href="#">03/24/17</a>	Science Flight #9 - CryoVEx Line	Science	5.8	87.4	246.2
<a href="#">03/27/17</a>	Science Flight #10 - Northwest Coastal A Line	Science	7.4	94.8	238.8
<a href="#">03/28/17</a>	Science Flight #11 - North Central Cap 01 Line	Science	7.6	102.4	231.2
<a href="#">03/29/17</a>	Science Flight #12 - Ellesemere Island 01 Line	Science	7.6	110	223.6
<a href="#">03/30/17</a>	Science Flight #13 - Ellesemere South Line	Science	7.9	117.9	215.7
<a href="#">03/31/17</a>	Science Flight #14- Alexander-Petermann Line	Science	6.5	124.4	209.2
<a href="#">04/03/17</a>	Science Flight #15- Zachariae 79N Fram Straight and BGTL ENSB Transit	Science	7.4	131.8	201.8
<a href="#">04/05/17</a>	Science Flight #16 - Svalbard North Line (High Priority)	Science	7	138.8	194.8
<a href="#">04/06/17</a>	Science Flight #17- Svalbard South Mission (High Priority)	Science	8.5	147.3	186.3

<a href="#">04/07/17</a>	Science Flight #18- Combined Zig Zag East Mission and Transit ENSB to BGTL	Science	8.3	155.6	178
<a href="#">04/10/17</a>	Science Flight #19- North Central Gap 3	Science	7.8	163.4	170.2
<a href="#">04/11/17</a>	Science Flight #20- CryoVex 2 (High Priority)	Science	7.8	171.2	162.4
<a href="#">04/12/17</a>	Science Flight #21-Northwest Coastal C	Science	7.2	178.4	155.2
<a href="#">04/13/17</a>	Science Flight #22-North Glaciers 02 Prime (High Priority)	Science	8.2	186.6	147
<a href="#">04/14/17</a>	Science Flight #23-IceSat-2 North/CryoSat-2 SARIn	Science	7	193.6	140
<a href="#">04/17/17</a>	Science Flight #24-Humboldt 01(High Priority)	Science	7.8	201.4	132.2
<a href="#">04/19/17</a>	Science Flight #25-Sea Ice - South Canada Basin (MediumPriority)	Science	7.8	209.2	124.4
<a href="#">04/20/17</a>	Transit Flight to Kangerlussuaq	Transit	3	212.2	121.4
<a href="#">04/21/17</a>	Science Flight #26-Southeast Coastal	Science	8	220.2	113.4
<a href="#">04/22/17</a>	Science Flight #27-Helheim-Kangerd	Science	7.8	228	105.6
<a href="#">04/24/17</a>	Science Flight #28-Geikie 01 (High Priority)	Science	8	236	97.6
<a href="#">04/26/17</a>	Science Flight #29-Devon-Bylot (Medium Priority)	Science	7.9	243.9	89.7
<a href="#">04/28/17</a>	Science Flight #30-Penny 01 (Medium Priority)	Science	6	249.9	83.7
<a href="#">04/29/17</a>	Science Flight #31-Thomas - Jakobshavn 01	Science	8.4	258.3	75.3
<a href="#">05/01/17</a>	Science Flight #32-Thomas - Jakobshavn-Eqip-Store	Science	8.4	266.7	66.9
<a href="#">05/02/17</a>	Science Flight #33-Thomas - ICESat-2 Central	Science	7.9	274.6	59
<a href="#">05/03/17</a>	Science Flight #34-Thomas - Southwest Coastal A	Science	8.3	282.9	50.7
<a href="#">05/05/17</a>	Science Flight #35-Helheim-Kangerdlugssuaq Gap B (High Priority)	Science	8.2	291.1	42.5
<a href="#">05/06/17</a>	Science Flight #36-Helheim-K-EGIG-Summit	Science	8	299.1	34.5
<a href="#">05/08/17</a>	Science Flight #37-Southeast Glaciers 01 (High Priority)	Science	8	307.1	26.5

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

**Source URL:** [https://airbornescience.nasa.gov/science\\_reports/OIB\\_-\\_P-3\\_Orion\\_04\\_22\\_17\\_Science\\_Report](https://airbornescience.nasa.gov/science_reports/OIB_-_P-3_Orion_04_22_17_Science_Report)